

tive abundance of the species seen is recorded and, where relevant, breeding seasons are discussed.

The following is a summary of the main groups:—

Summer nesters (sea birds and *Falco concolor*): Most species were present, though mostly in markedly less than breeding season numbers. The records suggest that many, perhaps most, of *Larus leucophthalmus* and *hemprichii*, and *Sterna bengalensis*, remain in the breeding area, and *Sula leucogaster* and *Phaethon aethereus* may also go into this category. The few *Falco concolor* and *Sterna anaethetus* may have been early returners. *Sterna repressa* (see Clapham, 1964: 386) might also have been present, but was not identified.

Other residents: Among the larger birds, breeding was only proved for *Neophron percnopterus*, but *Pandion haliaetus* may also have been doing so. Among the smaller birds, *Streptopelia decaocto*, *Oena capensis*, *Galerida cristata*, *Eremopterix nigriceps* and *Acrocephalus* sp. gave some indication of breeding activity. *Prinia gracilis* (see Clapham, 1964: 388) may have been overlooked.

Palearctic migrants: There were small numbers of waders, markedly less than in the autumn. Clapham (*pers. comm.*) found all the species mentioned except *Charadrius dubius*, mostly in larger numbers, and also *Erolia minuta*, *Tringa ochropus* and *glareola*, *Himantopus himantopus* and *Gallinago gallinago*. Small passerine migration should have been in full swing in March, but there seems to be little stop-over in the Dahlaks.

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The Brush Tongue of Artamidae

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The relationship of the Artamidae to other passerine families has not been adequately studied. It is generally agreed that its taxonomic position is obscure (Smythies, 1964). The single genus *Artamus* is remarkable for its uniformity, differences between species lie chiefly in plumage patterns and

size. Species of *Artamus* differ from members of other passerine families in possessing powder-down feathers. Another unusual feature of the species of Artamidae that warrants consideration is their brush-tipped tongue, which does not appear to have been reported previously. Analysis of gizzard contents and observation of Australian species of *Artamus* indicate that they are mainly insectivorous; there are, however, odd observations which indicate that they may at times be nectarivorous (e.g. Campbell, 1901).

Figure 1 shows the tongues of four Australian species of *Artamus*.

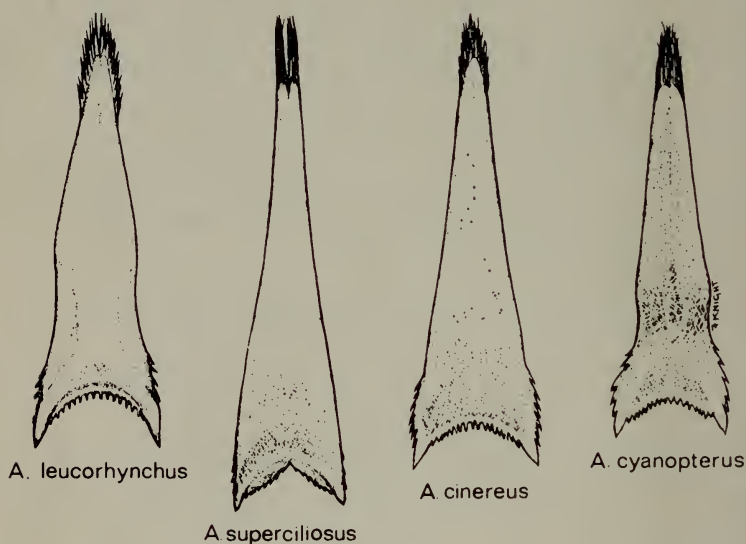


Fig. 1

In appearance the artamid tongue resembles that of the Zosteropidae, but the tip is less fimbriated and it is much broader in relation to its length than in *Zosterops*. The brush-tipped tongue need not necessarily indicate affinity with the Zosteropidae as a number of passerine families which do not appear to be closely related are known to have brush-tongued members (Rand, 1967; Gardner, 1925). Nevertheless, it would appear that a more thorough study of anatomical and physiological characters of the Artamidae might well provide further clues that could help to solve the problem of the phyletic position of the family.

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